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(54) **Improved lids for plastic packages with carrying handle.**

(57) The lid (4) comprises a substantially planar element having an edge portion adapted for engagement with the upper edge of a container (1) having two opposite faces whereto the ends of a band-like element (2) are riveted. The band-like element (2) is positioned on the bottom of the container for stacking purposes. A cut is provided in the lid (4) to define two flaps (11,12). The flaps (11,12) can be elastically displaced for permitting the band-like element to be inserted into the cut, when the band-like element is raised to a carrying position and the lid (4) is lowered onto the container.

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# IMPROVED LIDS FOR PLASTIC PACKAGES WITH CARRYING HANDLE

The present invention relates to improvements to allow the application of a lid on plastic containers provided with a handle, which are already widely used, especially in supermarkets, for packaging fruit and vegetable products.

Containers and lids, manufactured predominantly by thermoforming transparent plastic material, are currently shaped so that they can be mutually coupled by being pressed together.

Such containers for the packaging of fruit and vegetable products, are usually provided with a handle constituted by a plastic strap. In order to facilitate manufacture and stacking, the ends of the strap are riveted to the inner side of the two opposite main walls of the container. The strap thus defines a substantially "U"-shaped configuration resting on the bottom of the container.

By virtue of its fixing by means of two rivets, the handle is lifted with a simple upward rotation prior to filling the container with the products to be packaged.

The application of a lid would obviously prevent the use of the handle, and therefore products packaged in containers fitted with handles necessarily have no covering. In some cases, in order to prevent the removal of part of the already weighed and priced contents, the packages constituted by containers fitted with a handle are enclosed in a container made of netting, but this does not prevent the goods from being touched, to the detriment of their integrity and hygiene.

Accordingly, an object of the invention is to provide a lid which obviates the above described disadvantages.

Another object of the invention is to provide a lid which can be applied on a container without thereby concealing the carrying handle.

A further object of the invention is to provide a lid which permits access to said handles.

Still another object of the invention is to provide a lid which is usable on containers of any size and without altering current manufacturing systems and costs.

These objects and others which will become apparent hereinafter are achieved by lid as defined in the appended claims.

Further features of the invention will become apparent from the following detailed description and the drawings of some preferred embodiments thereof which are given merely by way of non-limitative example and wherein:

figure 1 is a top plan view of a known container, with the handle positioned inwardly;

figure 2 is a vertical sectional view of the container of figure 1;

figure 3 is a vertical sectional view of the container with the handle directed upwardly;

figures 4-5-6-7-8 are top plan views of some different embodiments of lids manufactured according to the invention, all of which are adapted for being applied on containers fitted with a handle.

Figures 1 to 4 show that the improvements according to the invention mainly refer to packages constituted by a container 1 and by a lid 4, which are manufactured by thermoforming low-thickness transparent plastic material and the respective edges whereof are shaped for mutual pressure coupling, whereas appropriate recesses or raised portions, acting as reinforcement ridges, give the two elements the required rigidity where necessary.

The handle 2, which consists of a simple flexible plastic strap, is fixed inside the container 1 by means of two rivets 3 by virtue of which it can be rotated from the fixing configuration of figure 2 to the carrying position of figure 3.

This manner of fixing the handle, which is common to all containers of this type regardless of their size, has been determined by requirements related to automation and stacking, since it is evident that the handle can follow the profile of the container and then rotate through 180° to reach the carrying position only if it is riveted against the inner surface of two opposite walls.

The solution according to the invention does not require alteration of current production lines for the manufacture of said containers, and consists in providing punched slots in the lid, so that besides the perimetric trimming, and as an alternative or in addition to the forming of possible aeration holes, it is possible to create an opening or a cut which allows the passage of the handle 2 through the lid when said lid is pushed downwardly onto the container for pressure coupling therewith.

Some practical embodiments of this solution are shown in the drawings.

With reference to figure 4, the lid 4 is constituted by a port or opening 5 which has a substantially rectangular shape and has such dimensions and such an arrangement as to allow the free passage of a handle which can be lifted to a position whereat it rises from the median region of a container, such as the handle of figures 1-2-3.

In order to ensure better protection of the covered goods, all of the lids of figures 5 to 8 have, rather than fixed ports or openings, cuts; by virtue of said cuts and of the flexibility of the plastic material which is normally used, the handle can open a passage by raising one or more flaps which return to the normal horizontal closure position

immediately thereafter.

Regardless of the shape and number of the flaps provided, said cuts always have two parallel portions through which, after the application of the lid, the two ends of the handle can be lowered into the underlying container without affecting the configuration of the adjacent flaps.

In the embodiment of figure 5, the cut is U-shaped in order to define a flap 6 the temporary lifting whereof allows the handle of the container to pass through the lid.

In the embodiment of figure 6 the cut is S-shaped and forms the two flaps 7 and 8, both of which are intended to be temporarily raised by the passage of the handle of the container.

In the embodiment of figure 7, the cut is Z-shaped and forms the flaps 9 and 10 which can be raised when the handle of the container passes.

Two flaps capable of being raised, indicated by 11 and 12 and obtained with a cut which can be defined as H-shaped, are also provided in the embodiment of figure 8.

It should be noted that all the embodiments with cuts and flaps are suitable for being completed by a seal which consists of an adhesive label, such as the one which bears the weight and price of the packaged goods, applied astride the cut after the closure of the container.

Obviously, any materials, shapes and dimensions may be used according to requirements, without thereby departing from the purview of the instant inventive concept.

Futhermore, all of the features of the invention may be replaced with other technically equivalent elements.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

## Claims

1. Lid for plastic packages with carrying handle, said lid being adapted to be applied by pressure on containers which have a handle fixed inside them, characterized in that said lid has an opening which is dimensioned and arranged so that when the lid is lowered onto the container to be covered, it allows the passage of the handle for carrying.

2. Lid according to claim 1, characterized in that said opening comprises a cut defining at least one flap, whereby the arrangement of said flap and the flexibility of the plastic material constituting the lid allows the handle of the container to open a temporary passage through which it can protrude to allow the handle to be positioned for carrying.

3. Lid according to claim 2, characterized in that said cut has two parallel portions through which the two ends of the handle can be lowered into the underlying container after closure of said container without interfering with the closure configuration of the contiguous flaps.

4. Lid according to claim 2 or 3, characterized in that said cut is "U"-shaped.

5. Lid according to claim 2 or 3, characterized in that said cut is "S"-shaped.

6. Lid according to claim 2 or 3, characterized in that said cut is "Z"-shaped.

7. Lid according to claim 2 or 3, characterized in that said cut is "H"-shaped.

8. Lid according to claim 2,3,4,5,6 or 7, characterized in that said lid has at least two flaps, one of said flaps being defined at each side of said cut, said handle being raisable to a carrying position via elastic deformation of said flaps.

9. Lid according to claim 9, characterized in that said flaps are at least temporarily interconnected by at least one self-adhesive label.

FIG. 3

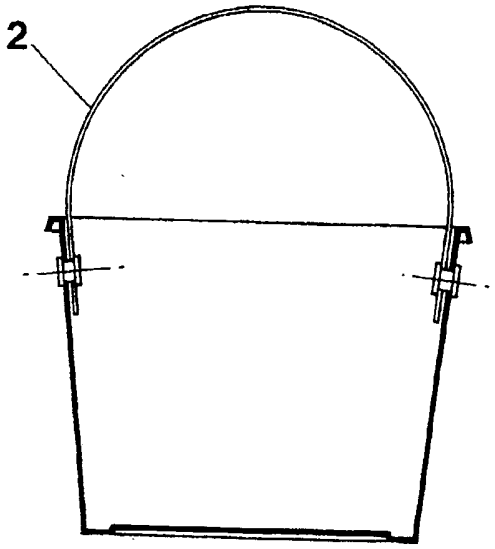



FIG. 2

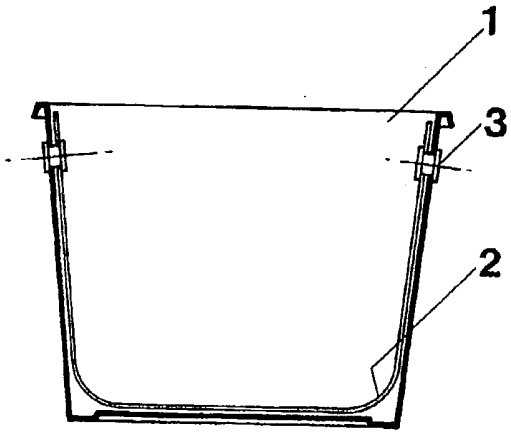



FIG. 1

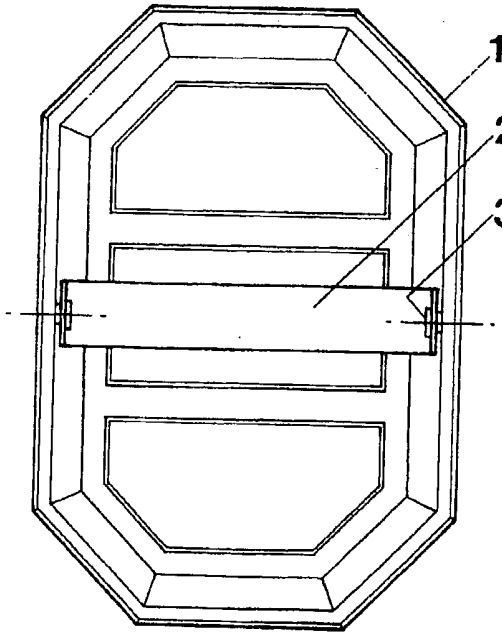



FIG. 4

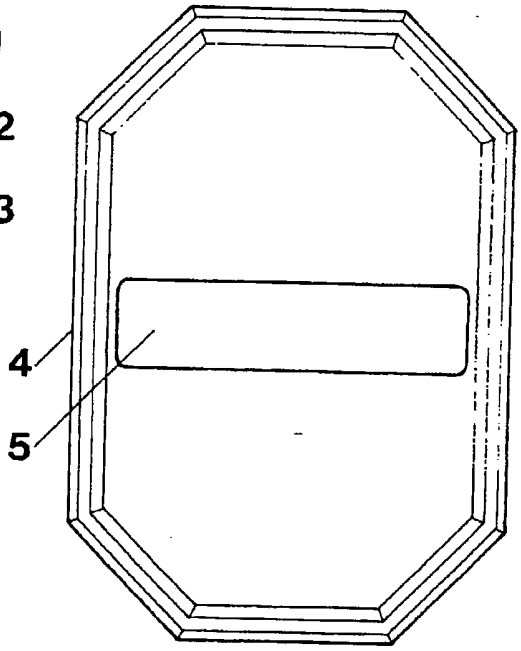


FIG. 5

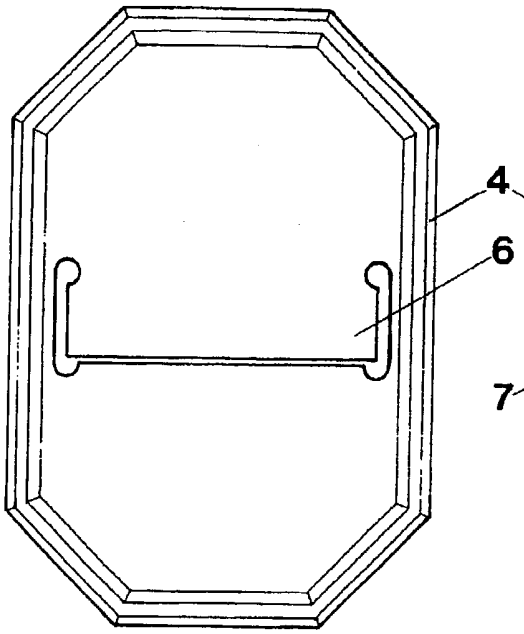



FIG. 6

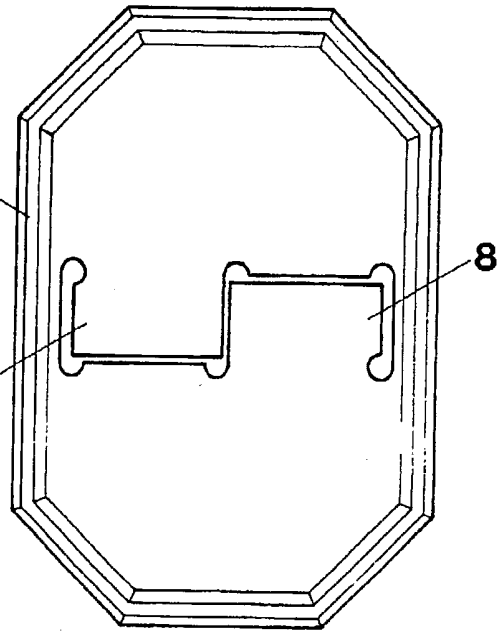



FIG. 7

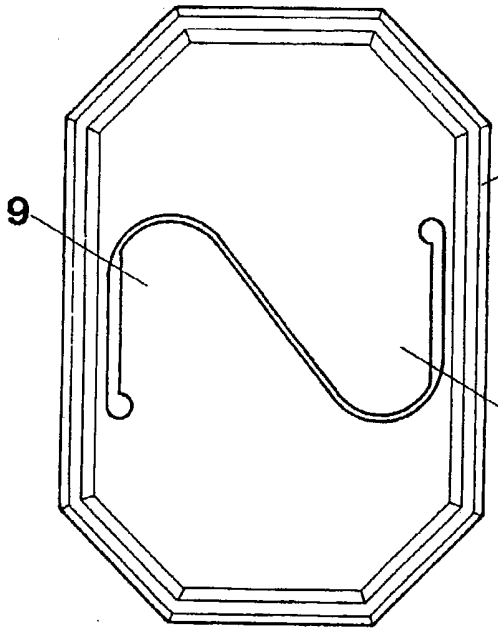
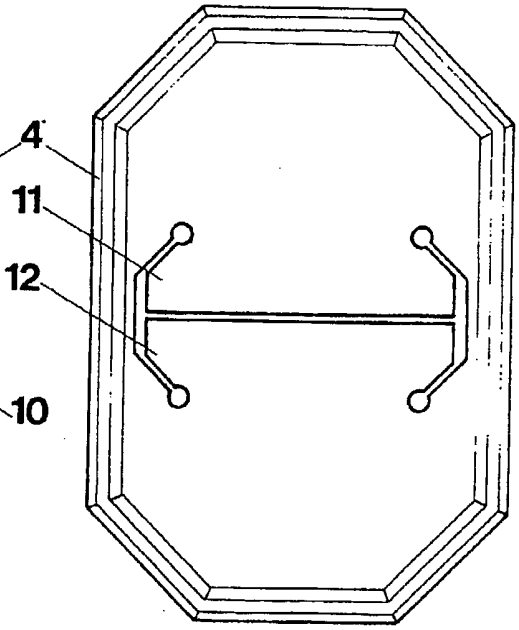



FIG. 8



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# EUROPEAN SEARCH REPORT

Application Number

EP 90 12 3439

## DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int. Cl.5) |
|---|---|---|---|
| Y | GB-A-4 664 68 (J.C. CLARK)<br>* Figures 1-3,7; page 2, lines 58-114 * | 1-8 | B 65 D<br>51/00<br>B 65 D 25/32 |
| Y | GB-A-1 004 335 (G. ANTONACCI)<br>* Figures 1,17; page 2, lines 107-112 * | 1-8 | |
| Y | US-A-4 328 904 (E.I. IVERSON)<br>* Figures 1,4-6; column 2, line 40 - column 3, line 62 * | 4-6 | |
| A | GB-A-1 184 9 (H.T. KEMP)<br>* Figure 3; page 1, lines 39-45 * | 1-3 | |

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

B 65 D

The present search report has been drawn up for all claims

| Place of search | Date of completion of search | Examiner |
|---|---|---|
| The Hague | 22 March 91 | PERNICE,C. |

CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone
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